

## **REMARKS/ARGUMENTS**

### ***I. Status of the claims***

Applicants understand that the Examiner has renumbered the claims. With entry of this amendment, renumbered claims 15-17, 24-31, 33, and 36 are canceled, claims 18-23, 32-39 are amended. Claims 18-23, 32, 34-35, and 37-39 are pending with entry of the amendment.

### ***II. Support for the amendments***

Support for the amendments can be found throughout the specification as originally filed. Many of the amendments were made to correct claim dependency in response to the renumbering of the claims by the Examiner. Support for "kits" in the various claims can be found on, e.g., page 10, line 27 through page 11, line 20. Support for "single-stranded" added in claims 18 and 32 is inherent in the teachings of the specification, which teaches that the first oligonucleotide and the second oligonucleotide hybridize to adjacent sequences in a target. *See, e.g.,* page 6, lines 21-29. As this only can occur with single-stranded oligonucleotides, it is clear from the specification that the oligonucleotides referred to in the specification are single-stranded. No new matter is added.

### ***III. Claim objections***

The Examiner objected to "is carrying" in claims 20 and 35. The Examiner also requested insertion of a comma in claims 23 and 39. The present amendments address these issues. Therefore, withdrawal of the objections is respectfully requested.

### ***IV. Rejection under 35 U.S.C. § 112, first paragraph***

Claims 33, 36, 38, and 39 were rejected for allegedly failing to meet the written description requirement of 35 U.S.C. § 112, first paragraph. Specifically, the Examiner argued that the specification did not describe an oligonucleotide carrying a FRET donor and a nitroindole moiety on the same nucleotide.

Applicants respectfully traverse the rejection. As claims 33 and 36 are canceled, the rejection of these claims is moot. Claims 38 and 39 have been amended to no longer depend from claims 33 and 36, respectfully. Therefore, the rejection is also moot with regard to claims 38 and 39. Withdrawal of the rejection is respectfully requested.

***V. Rejection under 35 U.S.C. § 112, second paragraph***

Claims 34 and 47 were rejected as indefinite for "the second entity" lacked antecedent basis. The claims have been amended to replace the term with "nitroindole moiety," which does have antecedent basis. Withdrawal of the rejection is there for requested.

***VI. Rejection under 35 U.S.C. § 102***

***A. Rejection in view of Nazarenko et al.***

Claims 18-22 were rejected as allegedly anticipated by Nazarenko *et al.* According to the Examiner, Nazarenko describes a hairpin primer comprising FAM, a donor for rhodamine, and a quencher (DABCYL) (column 38 of Nazarenko *et al.*) and a reverse primer labeled with rhodamine (column 35 of Nazarenko *et al.*). Applicants respectfully traverse the rejection.

The present claims, as amended, are directed to a kit comprising a plurality of oligonucleotides of specified structure. Nazarenko *et al.* does not describe a kit or composition or even experiment that was carried out in which the hairpin primer and the reverse primer referred to in the office action were used together. The hairpin primer described in column 38 was used with a standard (not labeled) reverse primer (SEQ ID NO:12), not a primer comprising rhodamine. *See, e.g.,* Nazarenko *et al.*, column 38, lines 15-17. Thus, at most, Nazarenko *et al.* describes use of the hairpin primer labeled with a dye and a quencher but without further labeling of the reverse primer.

The experiment described in column 35 of Nazarenko *et al.* does indeed involve a primer comprising rhodamine, but does not involve the hairpin primer. Instead, column 35

describes an experiment to determine if labeling of a reverse primer blocks incorporation of dNTP.

Absent additional information, Nazarenko *et al.* does not teach or suggest the invention presently claims. Accordingly, withdrawal of the rejection is requested.

**B. Rejection in view of Frutos *et al.***

Claims 18, 19, 32 and 34 were rejected as allegedly anticipated by Frutos *et al.* Specifically, the Examiner argued that the cited reference describes a hybridized duplex formed by SEQ ID NOs: 3 and 4 comprising a cy3 dye, a quencher and a 5'-nitroindole. The Examiner argued that this duplex of SEQ ID NOs: 3 and 4 was equivalent to the "first oligonucleotide" in the claims. The Examiner further argued that the reference described a "second oligonucleotide" labeled with Rox, which can act as an acceptor. Applicants respectfully traverse the rejection.

Applicant submit that it is clear from the application as filed that the oligonucleotides referred to are single-stranded. To further clarify this point, the claims are now amended to recite that the first and second oligonucleotides are single-stranded. Therefore, the duplex formed by SEQ ID NOs: 3 and 4 in Frutos *et al.* does not correspond to the "first oligonucleotide" in the pending claims.

Moreover, even if the Examiner was correct that the duplex of SEQ ID NOs: 3 and 4 could be interpreted as a "first oligonucleotide", the reference still does not anticipate the claims. The pending claims are directed to kits that comprise the plurality of oligonucleotides recited. In contrast, the reference does not describe the use of the duplex and the Rox-labeled oligonucleotide in the same composition or even experiment, let alone in a kit. Absent more, the cited reference cannot anticipate or render obvious the present claims.

Accordingly, Applicants respectfully request withdrawal of the rejection.

**VII. Rejection under 35 U.S.C. § 103**

Claim 23 was rejected as allegedly obvious in view of Nazarenko *et al.* and the Stratagene catalog. The Examiner argued that Nazarenko *et al.* described all of the components

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of the kit claimed in claim 23 and argued that the Stratagene catalog provided a motivation to combine the components into a kit. Applicants respectfully traverse the rejection.

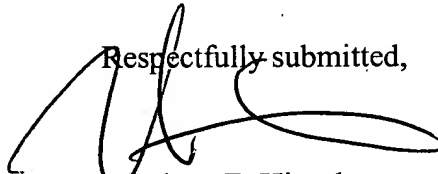
As noted above in section VI A, Nazarenko *et al.* does not in fact teach or suggest all of the components of the kit recited in claim 23. The Stratagene catalog does not address these omissions. Therefore, the cited references, separately or in combination, do not teach or suggest all of the elements of the claims. Therefore, Applicants respectfully request withdrawal of the rejection.

### CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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